

Listing of All Claims

1. (Currently amended) A method of wireless communication of digital data comprising:
 - providing a mobile unit comprising an accessory device coupled to a wireless telephone handset and operable to communicate in a plurality of alternative modes of digital wireless communication, including at least one packet data mode and a voice mode for establishing a call over a voice channel;
 - operating the mobile unit to assess at least a selected characteristic of each of the alternative modes;
 - based on the assessment, determining a preferred mode; and
 - if the preferred mode is the voice mode, transmitting a first digital data set from the mobile unit via the voice mode without significantly interrupting human speech communications over the same voice channel call.
- 2.-4. (Canceled)
5. (Original) The method of claim 1 wherein the selected characteristic is selected from a group of characteristics comprising return signal strength, cost, available bandwidth, transmission speed, User preference, Carrier Preference, data type and Cellular Roaming.
6. (Original) The method of claim 5 wherein the selected characteristic is the result of a function of at least a plurality of the members of the group of characteristics.
7. (Currently amended) The method of claim 1 wherein the first digital data set transmission comprises including transmitting the data to a call center; ~~for processing, and receiving from the call center a communication including digital data based on the transmitted data.~~
the method further comprising:
processing the transmitted first digital data set at the call center to generate a second digital data set; and
receiving the second digital data set from the call center.
8. (Currently amended) The method of claim 7 further comprising: including operating ~~the mobile unit to receive a geographic location signal, and wherein transmitting the data includes transmitting a message based on the geographic location signal.~~

receiving a geographic location signal at the mobile unit; and

processing the geographic location signal to form location data.

9. (Currently amended) The method of claim 8 wherein the first digital data set transmission to the call center comprises the location data, and the second digital data set received from the call center comprises location information~~including receiving location information from the call center responsive to the transmitted message.~~
10. (Currently amended) The method of claim 9 wherein the received location information is in a form-format selected from the group consisting of a group of forms comprising text, graphic, and audio. ~~street address, NMEA consisting of dillusion of precision latitude, longitude, heading, altitude, graphical map image, pseudo range, and geo-fencing criteria.~~
11. (Currently amended) The method of claim 1 wherein the first digital data set transmission ~~step of transmitting~~ occurs in response to a communication received via the wireless telecommunications network from a location remote from the mobile unit.
12. (Currently amended) The method of claim 11 including the mobile unit determining its location and the first digital data set transmission comprises transmitting location information in response to the received communication.
13. (Currently amended) The method of claim 1 wherein the first digital data set transmission ~~step of transmitting~~ includes directing the data communication ~~to a second mobile wireless unit.~~

14.-26. (Canceled)

27. (Currently amended) A multi-mode digital wireless communication system comprising:

a call center having a server connected to the Internet and to a wireless telecommunication network;

the call center being operable to communicate with a remote unit via a plurality of modes selected from the group of modes including voice and data calls via the wireless telecommunication network,

wherein the call center is operable to receive a first data set comprising location data ~~location information~~ from the remote unit and to process the first data set ~~location~~

information to generate a second data set comprising location information in a second format;
and

the call center is further operable to transmit the second data set ~~second format~~
~~information back~~ to the remote unit.

28. (Canceled.)

29. (Currently amended) The system of claim 27 wherein the ~~second format~~ of the
second data set is selected from the group consisting of text, graphic, and audio. a
~~group of formats including street address, latitude and longitude, graphical map~~
~~image, user preference, carrier preference, data type and cellular roaming.~~

30. (Currently amended) The system of claim 27 wherein the call center is operable to
query the remote unit to initiate the remote unit determining its own location and
transmitting, and to transit transmit the location information back to the call center.

31. (Currently amended) A method of ~~automatically~~ sending geographic location
data from a wireless telephone mobile unit comprising the steps of:

at the mobile unit, receiving an external request to send location data;

responsive to said external request, obtaining location data from a GPS unit coupled
to the mobile unit;

determining whether a voice mode is a primary transmission mode for location data
transmission;

if a voice mode is the primary transmission mode for location data transmission,
determining whether a call is currently active;

if no call is currently active, establishing a voice mode call over a voice channel to a
predetermined call center;

converting the location data to a selected format for transmission ~~via the voice mode~~
call over the voice channel;

muting the call and then transmitting the location data ~~[[in]]~~ over the voice channel to
the call center.

32. (Currently amended) The method of sending geographic location data from a
wireless telephone mobile unit according to claim 31 and further comprising:

receiving acknowledgement from the call center ~~destination~~ that the location data was
received; and,

in response to the acknowledgement, discontinue said muting ~~the voice channel~~
~~call~~the voice mode call.

33. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 31 wherein the call center is a 911 emergency call receiving center.

34. (Currently amended) The method of sending geographic location data from a wireless telephone mobile unit according to claim 31 wherein said muting and transmitting steps are carried out during a mute interval and further comprising selecting the mute interval such that the mute interval ~~having a maximum duration selected so that~~ it does not impair a conversation on the voice channel, thereby enabling substantially continuous voice contact with the call center while also transmitting the location data.

35. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 34 and further comprising:

buffering voice signals generated during said muting interval;

time compressing said buffered voice signals; and

replaying said buffered and compressed voice signals immediately after a conclusion of said muting interval so as to minimize loss of voice information.

36. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 31 wherein the external request comprises pressing a button located on the mobile unit.

37. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 31 wherein the external request comprises pressing a button located on an accessory unit operatively connected to the mobile unit.

38. (Currently amended) The method of sending geographic location data from a wireless telephone mobile unit according to claim 31 wherein the external request comprises a query from an entity located remote from the wireless telephone mobile unit. ~~Page 10, line 18.~~

39. (Currently amended) The method of sending geographic location data from a wireless telephone mobile unit according to claim 38 wherein the query from an entity located remote from the wireless telephone mobile unit is transmitted to the mobile unit via a ~~voice channel call~~ a voice mode call.

40. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 38 wherein the query from an entity

located remote from the wireless telephone mobile unit is transmitted to the mobile unit via a digital data transmission protocol.

41. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 40 wherein the query from an entity located remote from the wireless telephone mobile unit is transmitted to the mobile unit via an Internet Protocol.

42. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 38 wherein the entity located remote from the wireless telephone mobile unit comprises a call center.

43. (Currently amended) The method of sending geographic location data from a wireless telephone mobile unit according to claim 38 and further comprising, at the call center, determining a signal quality of ~~the voice channel call~~ the voice mode call, and signaling the mobile unit to change transmission mode if the determined signal quality does not meet a predetermined signal quality criterion.

44. (Currently amended) A method of automatically sending geographic location data from a wireless telephone mobile unit comprising the steps of:

obtaining location data from a GPS unit attached to the mobile unit;

establishing ~~a voice channel call~~ a voice mode call over a voice channel from the mobile unit to a predetermined call center;

converting the location data to audio frequency tones ~~a selected format for transmission via the voice channel call~~;

automatically muting any voice communication on the call;

~~and then~~ transmitting the converted location data in the voice channel ~~[[call]]~~ to the call center; and

automatically un-muting the voice communication on the call.

45. (Currently amended) The method of sending geographic location data from a wireless telephone mobile unit according to claim 44 wherein said muting, transmitting and un-muting steps ~~muting and transmitting steps~~ are carried out during a mute interval and further comprising selecting the mute interval such that the mute interval ~~having a maximum duration selected so that~~ is does not impair a conversation on the voice channel, thereby enabling substantially continuous voice contact with the call center while simultaneously transmitting the location data via the voice channel.

46. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 44 and further comprising, at the call center, requesting updated location data from the mobile unit.

47. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 44 and further comprising, at the call center, processing the received location data to determine location-specific information.

48. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 47 and wherein the location-specific information comprises at least one of latitude-longitude location, nearest street address, and geographical representation on a map.

49. (Currently amended) The method of sending geographic location data from a wireless telephone mobile unit according to claim 47 and further comprising transmitting the determined location-specific information from the call center to the mobile unit over the established ~~voice channel call~~voice mode call.

50. (Previously presented) The method of sending geographic location data from a wireless telephone mobile unit according to claim 47 and further comprising transmitting the determined location-specific information from the call center to the mobile unit over a separate digital data channel.

51. (Currently amended) The method of sending geographic location data from a wireless telephone mobile unit according to claim 47 Further comprising, at the call center, determining a signal quality of ~~the voice channel call~~the voice mode call at the call center and signaling the mobile unit to change transmission mode if predetermined signal quality criteria are not met.

52. (New) A remote method of determining a geographic location of a wireless telephone mobile unit without intervention by a user of the mobile unit, the method comprising the steps of:

at the mobile unit, receiving a location query via the wireless telecommunications network serving the mobile unit;

responsive to the location query, downloading location data from a GPS unit coupled to the wireless telephone mobile unit; and

transmitting the location data via the said wireless telecommunications network.

53. (New) The method of determining a geographic location of a wireless telephone mobile unit according to claim 52 wherein the location query is initiated by a call center.

54. (New) The method of determining a geographic location of a wireless telephone mobile unit according to claim 53 wherein the location query is initiated from the call center via a voice channel call to the mobile unit.

55. (New) The method of determining a geographic location of a wireless telephone mobile unit according to claim 52 wherein the location query is initiated by another user remote from the mobile unit.

56. (New) The method of determining a geographic location of a wireless telephone mobile unit according to claim 52 further comprising:

processing the location information transmitted by the mobile unit via the said wireless telecommunications network; and

reporting the processed location information to another location remote from the mobile unit.

57. (New) The method of determining a geographic location of a wireless telephone mobile unit according to claim 52 further comprising receiving the transmitted location information at a call center.

58. (New) The method of determining a geographic location of a wireless telephone mobile unit according to claim 57 further comprising processing the received location information at the call center.